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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

HANLEY, *et al.*

Application No.: 10/620,669

Filed: July 16, 2003

Title: **Inhibition of Peptide Cleavage in Plants**

Continuation of:

Application No. 60/396,396, Filed: 7/16/2002

Art Unit: 1632

Examiner:

MS Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**Statement that the Content of the Official and Computer
Readable Copies are the Same Pursuant to 37 CFR 1.821(f)**

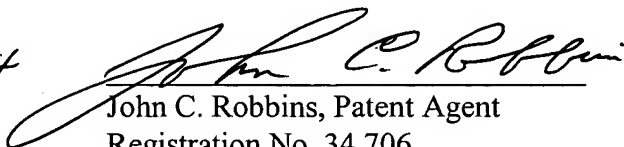
Dear Sir:

I hereby state that the information recorded in computer readable form is identical to the
written sequence listing.

Respectfully submitted,

Date:

Jan. 27, 2004



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Registration No. 34,706

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Vacaville, CA 95688

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SequenceListing.ST25
SEQUENCE LISTING

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<120> INHIBITION OF PEPTIDE CLEAVAGE IN PLANTS

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<141> 2003-07-16

<150> 60/396,396

<151> 2002-07-16

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<170> PatentIn version 3.2

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gccaatcttct ttggtaatgc aaatggcaca gcagttggtg ttgcccctct tgcccacatg 300

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SequenceListing.ST25

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gattattaca	gggatatagt	agcaattgga	ggattttctg	cagcttctca	aggaatcttc	1020
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gtgatgccac	tgggtgatgc	tggaaatgcc	agccaagcat	caaatggcaa	tttatgcaca	1260
agtggtagtc	tgattccaga	aaaagttgat	gggaaaattg	tagtatgtga	cagaggggatg	1320
aatgcaaggg	cacagaaggg	tttggttgct	aaagatgctg	gtggaatagg	gatgattttg	1380
gcaaacacag	actcttacgg	agatgagttg	gttgctgatg	cmcatctcat	accaacaggt	1440
gcagttggtc	aaactgctgg	tganttgatc	naaaggtaca	ttgcttctga	cagtaatcca	1500
attaccacaa	ttgcatttgg	aggtaccaag	ttgggcgtcc	aaccatcacc	ggtcgtcgca	1560
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gaagacacca	ggaatgtggg	tttcaacatc	atctctggaa	cttccatgtc	atgtcnccat	1740
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SequenceListing.ST25

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aggtcagcac tgatgactac aggttacagc acacacaaga atggnnaaat gatagaggat 1860
gttgccacag gaatgtcata tacaccagtt gatcatggcg ctggacatgt gaatccagca 1920
gcagctatga atcctggggt agkgtatgat ctacacagttg atgactatat aaacttcctt 1980
tgcgccctgg attacagtcc aagtatgatc aaggatcatcg caaagcgaga tatttcctgc 2040
gnaaacaata aggatataga gttgctgacc ttaattacc atcttttgcc attcctttgg 2100
aaacgggcct ggggcgaaca tgcaaatagt agtgcaccaa cagtgaccag atatacagg 2160
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gaagtgaaga ttcagggtga accacaaaca cttactttca gtcgaaagaa ggaaaagaaa 2280
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cctataatta agatgcctag gaaattctag catctagaca aggaaaatgt tggttgattt 2580
gtccagcaaa agacaggtgt tttacttgcc agattattat gtaccaagcc acacaatatg 2640
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<210> 11
<211> 2188
<212> DNA
<213> Artificial Sequence

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<220>
<223> Expression homologous to Alnus glutinosa, S52769 subtilisin-like
proteinase ag12

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<220>
<221> misc_feature
<222> (2159)..(2159)
<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (2161)..(2162)
<223> n is a, c, g, or t

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<400> 11
accctcgac cmacgcgycs gccacgcgt ccgccacgc gtccgctttc tccttcagag 60
tacaaagcca tcaagaattc tctagggat gtttcttcga tggaggacag gacagttaaa 120
attcacacga ccattcatc ccatttcctt ggcctaagct caatgtatgg ttcattggcca 180
aagtcaaact atggcaaagg tgttatcatt ggtgtagtgt atacaggggt ttggccagag 240
attaaaagct ttgatgatga tgggatgagc caagttccat caaggtggaa aggaatatgt 300
caaactggca ctcatgttaa ttcttcattg tgcaacaaga aactcatcgg agctcgttac 360

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SequenceListing.ST25

ttcaataaag gactactttc taaagtgaag aatcttacca tcatgataaa ttctgcccgt	420
gatacagagg gacatggaac tcatacttcc tctacagctg ctggaagtct tgtaaagggt	480
gcgtcttatt ttggctatgc ccctggtttt gcaataggcg tcgcaccaat ggctcatgtg	540
gctgtgtaca aggctctctg ggatggggcc ggtaccattt ctgatattct tgctgcattg	600
gatcaggcaa ttgcggatgg ttgtgatatc ttatccttgt catttggcgc agtttctcca	660
ttccctctat atatagatcc tatctctatt gcttcatttt ctgcaatgga gaaaggcata	720
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ccttggtttc tctctgttgc tgctagcaca gttgatcggg acgttatcag gatattaact	840
cttggtaatg gagtttcagt cactggttta tctctctacc ctgggaattc tacaagcgat	900
atttctgtta ttcttgtcaa gaattgctta gataagcagg aattgcaaaa tgttacagac	960
aaatttggtg tctgcattga caaaaacgca ttggtcggga aacaagttga aagtgtgaga	1020
cattcaaag ctgctgggtg tgtcttcata acaaatgact ttgtcactga cttgggcgaa	1080
tacctcaaaa cagaattccc atctgtgttt ctgaatttcc aaaatggtga tcaagttttg	1140
aaatatgtta acagcacttc ttcacaaaa gcaaagattg gacttcaagg gacactaatt	1200
ggtgtcgaac gagcaccagc tgtcgcgcat tttagttcga gggggccatc aatgacctgc	1260
ccgtttatcc tcaaacctga cctgatggct ccaggtcact taatactagc ttcatggtct	1320
ccactatcat ctgtgagtcc atatactgaa cttcacaata tctttaacat tatactctggc	1380
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gaatggagcc cagctgccat tcgttcggcc atgatgacta cagcggatgt tctagacaac	1500
acacaaagtc cgatccaaga catcggtcgt ccagagaatg ctgctgtac tcctcttgct	1560
atgggagctg gccatatcaa tcctaacaag gcaatagatc ctggactcat ctatgatata	1620
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accatcacta ggtcctctta tacttgcccc aaccatcat tggacctaaa ctatccatct	1740
ttcattgcct atttcaacgt gaatagcagc gagttggatc ctacaagagt acaagaattc	1800
aagaggacag tgactaatgt cggagaagggt gtgtcggaa atacagccga gctgactgca	1860
atgcctggac ttaaagttag tgttgttcct gaaaagttgg tttcaaaga caagtatgaa	1920
aagcaaagct acaagctgag gatagaatgt ccacaactga tgaatgattt cttggttcat	1980
ggttctttta gctgggtgga aaaggagggt aaatatgtag ttaggagccc aattgttgcc	2040
acaaattctt aagtttgatc ctttgacagg atagtactga ttactgaata ttccactaaa	2100
catgtctttt gagaacatga tatatacata cttgtgaagt gtagttctat gggtcacant	2160
nnaaaaaaaaa aaaaaaaaaa aaaaaaaaa	2188

SequenceListing.ST25

<210> 12
 <211> 1481
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Expression homologous to A thaliana, AAD12260 subtilisin-like protease

<400> 12
 ctccgatcga aatcctaagt ctaaattgcc aagtttgcta gagccagaaa tctctcaagt 60
 gccagaagc cttgagcgcg aggtgcctgg ccttaatcag aaagctttat tgatgaagaa 120
 ttgggaccaa ttccatctaa gtggagaggg atttaccaa ataattctga tcacaccttt 180
 tagtgcaaaa ggaagctaatt tggagcaagg tacttcaacg aaggatacgt gactctagca 240
 agatctctca attcaagttt ctacacacca cgagacactg atggacatgt tccccacacg 300
 cagttcaagg atcaagtgtt tcccggatat gaaatggaac agcaaagggg ggatcaccaa 360
 aagtaagagt agcagcttac agagtttgct ggcctccaat tatgggcagt ggggtgctttg 420
 attcagatat cttggttgct tttgatttgg taattgatga tggcgtggac gtgctttcag 480
 tctcacttgg aggagatact ggagcatatg tcaatgactc tgtagctatt ggttcatttc 540
 atgttggttaa gcacggcatt gttgtcgtta cctctgctgg taactcgtcc tgggtccggg 600
 acaatacgaa aaaattgcac cttggctcat aactgttggc gcgagaacta tggattgtca 660
 gtttcccagc tatatcattt taggaaacaa aaagcagtac aatttgaaac actgccc aaa 720
 tgcattgttct tccctattat aaatgttgct tcagcaaaaag ctccccatgc ttcaactgac 780
 gatgctctct tatgcaaagc tggggcattg gacccaaaga aggtaaaggt aactatttta 840
 gtttgtctaa gaggagataa tacgaggggt gacaagggac agcaagctgc tttggcaggt 900
 gcagttggaa cgattctagc caacgattat gcattctggc atgaaatttt tgctgattct 960
 ctctcgtctt acctgctacg caaattagtt aactgatgg acttgaactc tttagttcaa 1020
 caagtatacc tacagcttcc attacacatc caacgactta attgggaaca aagccagctc 1080
 cagtcatagc agccttttca tcaataggac ctaacactgt tacttgagg atccttaagg 1140
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 gagcaagttg aagcacaata tagtttttgt tctgttagta gcagtttaaa gattttgtca 1320
 tttgtacatc gtgtatagtt ctaatgtctg tttttaggag ttgataaaaa tagtgtcatg 1380
 caatttgctt aggtatatatt attgacattg tgatccttcg gttttttata atgaacaatg 1440
 aaattttgtg gaaaaaaaa aaaaaaaaa aaaaaaaaa a 1481

<210> 13

SequenceListing.ST25

<211> 1193
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Expression homologous to Tomato, CAA07250 serine protease

<400> 13
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 aatcggcttc aggacggttc aactaaatca gccgatgctc atgtccttcc ggccctggat 120
 gtttcatttt ttgatggatt tcaaattact gagtatatga aatcaacaaa gaatcctggt 180
 gctagaatta cattccaagg aacgataata ggcgataaaa atgctccagt gcttgctggt 240
 ttttcatctc gcggaccaag cacagctagt cctggaatct tgaaacctga tattattggt 300
 cctggtgtta atgtcctagc agcttggcct acttctgtcg aaaacaaaac caacacaaa 360
 tcaacattca acataatttc cggtacctct atgtcatgtc ctcaccttag cggagttgca 420
 gcattgttaa aaagcgcgca ccctacttgg tcccctgcag ctattaaatc agcaatcatg 480
 acaaccgctg atacagtcaa cctcgccaac aatcccatat tagatgaaat gctccgctct 540
 gcaaacatct ttgccattgg tgcaggacat gtcaatccat cacgagcaaa tgatccagga 600
 ctagtttacg atacacaatt caaggattac atatcttatt tatgtggttt gaaatacaca 660
 gatcgacaga tgggaagcct tctacaacgc agaacaagtt gctcgaaagt gaaaagtatt 720
 cctgaagcac aactcaatta cccttcgttt tccatttcac ttggagcaaa tcaacaaaca 780
 tacacaagaa cagtgacaaa cgtcggggag gcaatgtcat cttatcgcgt gaagatagtt 840
 tcaccacaaa atgtttccgt tggtgttaag cttcaactc taaaatttac gaagttgaat 900
 cagaagttga cataccgagt gacattttcc acaacaaca acatcacaaa catggaagtt 960
 gttcatggat acttgaaatg gacaagtgat aagcattttg taagaagtcc aattgctggt 1020
 attctacaag agcatgaaac accagaagat tagtgtcttt actttttaat aatttgttca 1080
 atttataata accccgtatt aattgattgt atccaaaatg tagaatgagt gcaaaaattg 1140
 ctcatgtttt attctactgg tgatatttcc cttgtggtaa aaaaaaaaaa aaa 1193

<210> 14
 <211> 748
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Expression homologous to Tomato, T06580 subtilisin-like proteinase p69f

<400> 14
 ggcgtgatta tcggagttat agacactgga attgttcctg accatccttc atttagcgac 60
 gttgggatgc ctccctccgcc tgctaaatgg aaaggatttt gtgagtctaa tttcacgacc 120

SequenceListing.ST25

aagtgtaca	acaaactcat	tggagccagg	tctttcccgc	ttgacaatgg	tcccatagat	180
gaaaatggac	atggtacgca	tacagcaagc	acagctgcag	gagcctttgt	gaaaggtgct	240
aatgtatttg	ggaatgccaa	tggaacagca	gttggtgttg	cccctcttgc	gtacatagcc	300
atatataagg	tatgcggttc	tgatggcggt	tgttctgatg	ttgaaatttt	agctgcgatg	360
gatgtagcta	ttgatgatgg	cgtagatatt	ctatcaatat	cccttggtgg	aactagtaat	420
ccgttccata	atgacaagat	tgctcttggg	gcgtatagtg	caacagaaag	aggtattctt	480
gttagttggt	ctgcaggcaa	tagtggtcca	ttccaacgca	ctgtagacaa	tgacgcccct	540
tggattctca	cagttggcgc	tagcactcat	gatagaaaac	taaaggccac	tgtaagctt	600
ggaaataaag	aagaatttga	aggagaatct	gcttatcatc	caaagacttc	aaactcaaca	660
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ataccaggat	cactcactga	cccttcta				748

<210> 15
 <211> 748
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Expression homologous to Tomato, T06580 subtilisin-like
 proteinase p69f

<400> 15	
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caagtgtaac	aacaaactca ttggagccag gtctttcccg cttgacaatg gtcccataga 180
tgaaaatgga	catggtacgc atacagcaag cacagctgca ggagcctttg tgaaaggtgc 240
taatgtattt	gggaatgccaa atggaacagc agttggtgtt gcccctcttg cgtacatagc 300
catatataag	gtatgcggtt ctgatggcgt ttgttctgat gttgaaattt tagctgcgat 360
ggatgtagct	attgatgatg gcgtagatat tctatcaata tcccttggtg gaactagtaa 420
tccgttccat	aatgacaaga ttgctcttgg ggcgtatagt gcaacagaaa gaggtattct 480
tgtagttgt	tctgcaggca atagtgtgcc attccaacgc actgtagaca atgacgcccc 540
ttggattctc	acagttggcg ctagcactca tgatagaaaa cttaaaggcca ctgttaagct 600
tggaaataaa	gaagaatttg aaggagaatc tgcttatcat ccaaagactt caaactcaac 660
attcttcact	ctatttgatg ttgaaaagat agtacacgag caaccagtag cccctttctg 720
cataccagga	tcactcactg acccttct 748

<210> 16
 <211> 2538
 <212> DNA

SequenceListing.ST25

<213> Artificial Sequence

<220>

<223> Expression homologous to A thaliana, BAB02339 cucumisin-like serine protease

<400> 16

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taatttcagt ccaattggac ggtcataaaa ctttcatagt acacgtgtcc aaatcccata	120
agccccacat ctttactacc cgccaacatt ggtactcctc catcctccga tcagtctctt	180
cttctttccca acactctgcc aaaatccttt actcttacga ttatgctgcc cgtggtttct	240
ctgcccgtct cacttccggg caggctgacc ggctccgccg catgcctggc gtggtctccg	300
tcgtacctga ccgtgcacgt cagcttcaca ccactcacac accgaccttc ttaggcctcg	360
cagattcatt tgggctttgg cccaactccg attacgctga tgacgtcatc gtcgggggtgc	420
tcgacacggg catttgggcc gaaaggccga gcttttccga cggcgggctt tctgcagtcc	480
cttccggttg gaaaggaaaa tgcgaaactg ggctggactt tcctgcaact tcatgtaacc	540
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cttcaactgc agctggatct gttgtagcta acgctagttt ttttcaatac gcaaaagggtg	720
aagctagagg catggctgtg aaagctcgaa tagcagctta taagatctgt tggaaaacag	780
gggtgttttg ttctgatatt ttagctgcaa tggatcaagc tgttgctgat ggagttcacg	840
tgattttctt tttccgttggc gctgacgggt atgcaccgga atatgatgcg gattctattg	900
ctattggagc ttttggtgct tcagaacatg gcgttgttgt ctcttgctct gctggaaact	960
ccgggtcccgg tgcttcacc gcggtcaacg ttgcgccgtg gattctcacc gttgctgctt	1020
caacgataga ccggggagttt ccggctgatg ttatttttagg agatggcaga atattcgggtg	1080
gcgtatccct gtattccggc gatccgctcg gggattcaaa gctacctctt gtttactccg	1140
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aaattgtatt atgtgatcga ggcggcaatg ctagagtaga gaaaggaagt gcagtgaaat	1260
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attacgtcaa atctgattca tcacaaaaag cgacgattgt tttcaaagga actgtaatcg	1440
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caccggagat ccttaaaccg gatgttactg caccaggagt caacatatta gccggttgga	1560
ccgggtccat aggaccaaca gatttggaag ttgataccag acgagtggaa ttcaacatta	1620
tatctggtac atccatgtct tgtcctcatg ttagcgggtt agctgcttta cttagaaaag	1680

SequenceListing.ST25

cttacccata atggaccaca gcagccatca aatctgccct catgacaaca gcttacaacg	1740
ttgataactc cggcaaaacc ttacagatc tcgcgacagg ccaggaatcg agtccgtttg	1800
ttcacgggtc ggggtcatgtg gatccgaaca gagcactaga tccaggctctt gtctacgata	1860
ttgacacgaa ggattacgtg gatTTTTTat gcgccattgg ttatgatccc aaaagaattt	1920
caccgttcgt gaaagatact tcttcagtga attgcagcga aaagaattta gttagtccgg	1980
gggatttgaa ttatccatcg ttctcagttg tatttggcag tgatagtgtg gtgaaaaaca	2040
agcgtgtggt taaaaatgtt ggcaggaata caaatgcggt gtatgagggtg aaaataaatg	2100
cgccgggttc ggtggagggtg aagggtgactc cgactaagct tagtttttagc gagaaaaata	2160
agagtttgtc gtatgagatt agtttttagca gtaatggaag tgttgggttg gagagagtaa	2220
aaggctcttg atcagcattt ggggtcaattg agtggagtga tggaattcac agcgtgagga	2280
gtccaattgc ggtgcattgg ctactccact ctgctacaga atctcagtga gcaatggact	2340
atgaagcaag aagataattg tgctaattctg caaactgtta tgggccagaa acaggaacaa	2400
ggctaagtcc agaaaggaaa aggaaatagg gaaggaacat ctatctgttg aaataatgtt	2460
aagaaatttt catcattctt ttcttgttta tgagtattta tcagccacaa aaaaaaaaaa	2520
aaaaaaaaa aaaaaaaaaa	2538

<210> 17

<211> 2426

<212> DNA

<213> Artificial Sequence

<220>

<223> Expression homologous to *Alnus glutinosa*, S52769 subtilisin-like proteinase ag12

<400> 17

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agctttttct agccatcaga attggtactt gaccactctt gcttctgtat caggtagttc	180
aagtcttgga actgaaagta atagaaattc cttttcctca tcaaaactag tatatgctta	240
cactaacgct attcatggtt ttagtgcaac tctttctcct tctgagctac aagttataaa	300
aaattctcca ggctatcttt cttcaactaa ggacatgaca gttaaaattg acacgacaca	360
cacgtctcaa ttccttggcc taaattccga ttctggtgca tggccaaagt cagactatgg	420
caaagatgtt atagtggat tagttgacac agggatttgg ccagagagta aaagctataa	480
tgataatggg atgactgaag ttccatcaag atggaaagga gaatgtgaaa gtggaactca	540
atttaattcc tctttatgca acaagaaact cattggtgcg cgttacttca acaaaggcct	600
aattgccaat aatccgaata ttaccatctc gatgaattca gctcgtgaca ctgatgggca	660

SequenceListing.ST25

tggaactcac	acatcctcta	cagctgcagg	aagtcattgta	gaatctgcat	cttatttttg	720
ctatgcgcgt	ggttctgcta	cagggatggc	accaaaggct	catgtggcaa	tgtacaaggc	780
tttgtgggaa	gaaggtacaa	tgttatctga	tattctggct	gcaattgatc	aggcaattga	840
ggatggagt	gatataatat	ccttatcatt	aggcatagat	gatcttgctt	tatatgagga	900
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tgctgctggc	acagttgatc	gcgaatttat	cgggacacta	agtctgggta	atggagtttc	1080
agtcactggt	ttatctctct	accccgggaa	ttccagttca	agcgaaagct	ccatcgtttt	1140
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aattcgctca	ggagagcttt	tcagtaactt	caacatcata	tcaggtagct	caatgtcatg	1620
ccctcatgca	gctgggtgtag	cagcacttct	gaaaggagca	caccccaaat	ggagtcctgc	1680
tgccatccgg	tcggccatga	tgaccacagc	cgacacgatg	gataacatgc	aaatgcccat	1740
ccgagacata	ggtcgcaaca	ataatgctgc	cagtccccta	gccatgggag	ctggccgtat	1800
caatccaaat	aaggcactag	accctggact	tatctatgac	attacatcac	aggactatat	1860
caatctcctc	tgtgctctag	attttacatc	tcaacagata	aaagccatta	caaggctcctc	1920
tgcttattcc	tgttccaact	catcattgga	tttaaactat	ccatcattca	taggctattt	1980
caattataac	agcagcgagt	cagaccctaa	aaggatacaa	gaattccaga	ggacggtgac	2040
taatgtagga	gaaggtatgt	ctgtatatac	agccaaattg	acctcaatgg	gtgattataa	2100
agctagtgtt	gcacctgaca	agttggtttt	caaagagaag	tatgaaaagc	aaagctacaa	2160
gctaaggata	gaaggtccat	tgctagttaga	tattatcttg	tttatggttc	tttgagctgg	2220
gtggaaacta	gcggtaaata	tgttgtaaaa	agtcccattg	tcgcaactac	cataagagt	2280
gatcctctgt	gaggacagaa	ctgattatga	gtcctgtatt	ctgaaaatgt	gatacagtga	2340
tgaataattg	tgaagttaaa	ttcaaaaaaa	aatcttttca	gttagttaaa	actaacttgc	2400
tgattaaaaa	aaaaaaaaaa	aaaaaa				2426

<210> 18
<211> 737

SequenceListing.ST25

<212> PRT

<213> Nicotiana benthamiana

<400> 18

Ala Asn Cys Ile Thr Met Tyr Phe Leu Leu Leu Thr Ile Leu Leu Leu
1 5 10 15

Thr Leu Asn Pro Leu Thr Met Ala Glu Ser Glu Thr Tyr Ile Ile His
20 25 30

Met Asp Leu Ser Ala Met Pro Lys Ala Phe Ser Ser His Gln Asn Trp
35 40 45

Tyr Leu Thr Thr Leu Ala Ser Val Ser Gly Ser Ser Ser Leu Gly Thr
50 55 60

Glu Ser Asn Arg Asn Ser Phe Ser Ser Ser Lys Leu Val Tyr Ala Tyr
65 70 75 80

Thr Asn Ala Ile His Gly Phe Ser Ala Thr Leu Ser Pro Ser Glu Leu
85 90 95

Gln Val Ile Lys Asn Ser Pro Gly Tyr Leu Ser Ser Thr Lys Asp Met
100 105 110

Thr Val Lys Ile Asp Thr Thr His Thr Ser Gln Phe Leu Gly Leu Asn
115 120 125

Ser Asp Ser Gly Ala Trp Pro Lys Ser Asp Tyr Gly Lys Asp Val Ile
130 135 140

Val Gly Leu Val Asp Thr Gly Ile Trp Pro Glu Ser Lys Ser Tyr Asn
145 150 155 160

Asp Asn Gly Met Thr Glu Val Pro Ser Arg Trp Lys Gly Glu Cys Glu
165 170 175

Ser Gly Thr Gln Phe Asn Ser Ser Leu Cys Asn Lys Lys Leu Ile Gly
180 185 190

Ala Arg Tyr Phe Asn Lys Gly Leu Ile Ala Asn Asn Pro Asn Ile Thr
195 200 205

Ile Ser Met Asn Ser Ala Arg Asp Thr Asp Gly His Gly Thr His Thr
210 215 220

Ser Ser Thr Ala Ala Gly Ser His Val Glu Ser Ala Ser Tyr Phe Gly
225 230 235 240

SequenceListing.ST25

Tyr Ala Arg Gly Ser Ala Thr Gly Met Ala Pro Lys Ala His Val Ala
 245 250 255
 Met Tyr Lys Ala Leu Trp Glu Glu Gly Thr Met Leu Ser Asp Ile Leu
 260 265 270
 Ala Ala Ile Asp Gln Ala Ile Glu Asp Gly Val Asp Ile Ile Ser Leu
 275 280 285
 Ser Leu Gly Ile Asp Asp Leu Ala Leu Tyr Glu Asp Pro Val Ala Ile
 290 295 300
 Ala Thr Phe Ala Ala Met Glu Lys Asp Ile Phe Val Ser Thr Ser Ala
 305 310 315 320
 Gly Asn Glu Gly Pro Asp Asp Gln Ala Leu His Asn Gly Thr Pro Trp
 325 330 335
 Val Leu Thr Val Ala Ala Gly Thr Val Asp Arg Glu Phe Ile Gly Thr
 340 345 350
 Leu Ser Leu Gly Asn Gly Val Ser Val Thr Gly Leu Ser Leu Tyr Pro
 355 360 365
 Gly Asn Ser Ser Ser Ser Glu Ser Ser Ile Val Phe Leu Lys Thr Cys
 370 375 380
 Leu Glu Glu Lys Glu Leu Glu Lys Asn Ala His Lys Phe Ala Val Cys
 385 390 395 400
 Tyr Asp Thr Asn Gly Ser Val Ser Asp Gln Leu Tyr Asn Val Lys Asn
 405 410 415
 Thr Lys Val Ala Gly Gly Ile Phe Ile Thr Asn Tyr Thr Asp Leu Glu
 420 425 430
 Phe Tyr Leu Gln Ser Glu Phe Pro Ala Val Phe Leu Asn Phe Glu Asp
 435 440 445
 Gly Asp Lys Val Leu Glu Tyr Ile Lys Asn Ser His Ser Pro Lys Ala
 450 455 460
 Arg Leu Glu Phe Gln Val Thr His Leu Gly Ala Lys Pro Ala Pro Lys
 465 470 475 480
 Val Ala Ser Tyr Ser Ser Arg Gly Pro Ser Glu Ser Cys Pro Phe Ile
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SequenceListing.ST25

485

490

495

Leu Lys Pro Asp 500 Leu Met Ala Pro Gly 505 Ala Leu Ile Leu Ala 510 Ser Trp
 Pro Gln Lys 515 Ser Pro Ala Thr Gln 520 Ile Arg Ser Gly 525 Glu Leu Phe Ser
 Asn Phe 530 Asn Ile Ile Ser Gly 535 Thr Ser Met Ser Cys 540 Pro His Ala Ala
 Gly 545 Val Ala Ala Leu 550 Leu Lys Gly Ala His Pro 555 Lys Trp Ser Pro Ala 560
 Ala Ile Arg Ser 565 Ala Met Met Thr Thr 570 Ala Asp Thr Met Asp 575 Asn Met
 Gln Met Pro 580 Ile Arg Asp Ile Gly 585 Arg Asn Asn Asn Ala 590 Ala Ser Pro
 Leu Ala Met 595 Gly Ala Gly Arg Ile 600 Asn Pro Asn Lys 605 Ala Leu Asp Pro
 Gly 610 Leu Ile Tyr Asp Ile 615 Thr Ser Gln Asp Tyr 620 Ile Asn Leu Leu Cys
 Ala 625 Leu Asp Phe Thr 630 Ser Gln Gln Ile Lys 635 Ala Ile Thr Arg Ser 640 Ser
 Ala Tyr Ser Cys 645 Ser Asn Ser Ser Leu 650 Asp Leu Asn Tyr Pro 655 Ser Phe
 Ile Gly Tyr 660 Phe Asn Tyr Asn Ser 665 Ser Glu Ser Asp Pro 670 Lys Arg Ile
 Gln Glu Phe 675 Gln Arg Thr Val 680 Thr Asn Val Gly Glu 685 Gly Met Ser Val
 Tyr Thr 690 Ala Lys Leu Thr 695 Ser Met Gly Asp Tyr 700 Lys Ala Ser Val Ala
 Pro 705 Asp Lys Leu Val 710 Phe Lys Glu Lys Tyr 715 Glu Lys Gln Ser Tyr 720 Lys
 Leu Arg Ile Glu 725 Gly Pro Leu Leu Val 730 Asp Ile Ile Leu Phe 735 Met Val

SequenceListing.ST25

Leu

<210> 19
 <211> 289
 <212> PRT
 <213> Nicotiana benthamiana

<400> 19

Val Ser Thr Gln Ser Ala Ile Thr Ala Gly Asp Asp Gly Ile Ser Glu
 1 5 10 15

Val Pro Ser Arg Trp Lys Gly Glu Cys Glu Ser Gly Thr Glu Phe Asn
 20 25 30

Ser Ser Leu Cys Asn Lys Lys Leu Ile Gly Ala Arg Tyr Phe Asn Lys
 35 40 45

Gly Leu Leu Ala Asn Asn Pro Asn Leu Asn Ile Ser Met Asn Ser Ser
 50 55 60

Arg Asp Thr Asp Gly His Gly Thr His Thr Ser Ser Thr Ala Ala Gly
 65 70 75 80

Ser Tyr Val Glu Gly Ala Ser Tyr Phe Gly Tyr Ala Thr Gly Thr Ala
 85 90 95

Ile Gly Ile Ala Pro Lys Ala His Val Ala Met Tyr Lys Ala Leu Trp
 100 105 110

Glu Glu Gly Val Tyr Leu Ser Asp Val Leu Ala Ala Ile Asp Gln Ala
 115 120 125

Ile Thr Asp Gly Val Asp Val Leu Ser Leu Ser Leu Gly Ile Asp Ala
 130 135 140

Ile Pro Leu His Glu Asp Pro Val Ala Ile Ala Ala Phe Ala Ala Leu
 145 150 155 160

Glu Lys Gly Ile Phe Val Ser Thr Ser Ala Gly Asn Glu Gly Pro Tyr
 165 170 175

Tyr Glu Thr Leu His Asn Gly Thr Pro Trp Val Leu Thr Val Ala Ala
 180 185 190

Gly Thr Val Asp Arg Glu Phe Ile Gly Thr Leu Thr Leu Gly Asn Gly
 195 200 205

SequenceListing.ST25

Val Ser Val Pro Gly Leu Ser Leu Tyr Pro Gly Asn Ser Ser Ser Ser
210 215 220

Glu Ser Ser Leu Val Tyr Val Glu Cys Gln Asp Asp Lys Glu Leu Gln
225 230 235 240

Lys Asn Ala His Lys Phe Val Val Cys Leu Asp Lys Asn Asp Ser Val
245 250 255

Gly Glu His Val Tyr Asn Val Arg Asn Ser Lys Val Ala Gly Ala Val
260 265 270

Phe Ile Thr Asn Thr Thr Asp Leu Glu Phe Tyr Leu Gln Ser Glu Phe
275 280 285

Pro

<210> 20
<211> 683
<212> PRT
<213> Nicotiana benthamiana

<220>
<221> misc_feature
<222> (7)..(7)
<223> Xaa can be any naturally occurring amino acid
<400> 20

Thr Pro Arg Pro Thr Arg Xaa Pro Thr Arg Pro Pro Thr Arg Pro Leu
1 5 10 15

Ser Pro Ser Glu Tyr Lys Ala Ile Lys Asn Ser Leu Gly Tyr Val Ser
20 25 30

Ser Met Glu Asp Arg Thr Val Lys Ile His Thr Thr His Ser Ser His
35 40 45

Phe Leu Gly Leu Ser Ser Met Tyr Gly Ser Trp Pro Lys Ser Asn Tyr
50 55 60

Gly Lys Gly Val Ile Ile Gly Val Val Asp Thr Gly Val Trp Pro Glu
65 70 75 80

Ile Lys Ser Phe Asp Asp Asp Gly Met Ser Gln Val Pro Ser Arg Trp
85 90 95

Lys Gly Ile Cys Gln Thr Gly Thr Gln Phe Asn Ser Ser Leu Cys Asn
100 105 110

SequenceListing.ST25

Lys Lys Leu Ile Gly Ala Arg Tyr Phe Asn Lys Gly Leu Leu Ser Lys
 115 120 125
 Val Lys Asn Leu Thr Ile Met Ile Asn Ser Ala Arg Asp Thr Glu Gly
 130 135 140
 His Gly Thr His Thr Ser Ser Thr Ala Ala Gly Ser Leu Val Lys Gly
 145 150 155 160
 Ala Ser Tyr Phe Gly Tyr Ala Pro Gly Phe Ala Ile Gly Val Ala Pro
 165 170 175
 Met Ala His Val Ala Val Tyr Lys Ala Leu Trp Asp Gly Ala Gly Thr
 180 185 190
 Ile Ser Asp Ile Leu Ala Ala Leu Asp Gln Ala Ile Ala Asp Gly Cys
 195 200 205
 Asp Ile Leu Ser Leu Ser Phe Gly Ala Val Ser Pro Phe Pro Leu Tyr
 210 215 220
 Ile Asp Pro Ile Ser Ile Ala Ser Phe Ser Ala Met Glu Lys Gly Ile
 225 230 235 240
 Phe Val Ser Val Ser Ala Gly Asn Glu Gly Pro Phe Asp Gln Ser Leu
 245 250 255
 Ser Asn Glu Ala Pro Trp Phe Leu Ser Val Ala Ala Ser Thr Val Asp
 260 265 270
 Arg Asp Val Ile Arg Ile Leu Thr Leu Gly Asn Gly Val Ser Val Thr
 275 280 285
 Gly Leu Ser Leu Tyr Pro Gly Asn Ser Thr Ser Asp Ile Ser Val Ile
 290 295 300
 Leu Val Lys Asn Cys Leu Asp Lys Gln Glu Leu Gln Asn Val Thr Asp
 305 310 315 320
 Lys Phe Val Val Cys Ile Asp Lys Asn Ala Leu Val Gly Lys Gln Val
 325 330 335
 Glu Ser Val Arg His Ser Asn Ala Ala Gly Ala Val Phe Ile Thr Asn
 340 345 350
 Asp Phe Val Thr Asp Leu Gly Glu Tyr Leu Lys Thr Glu Phe Pro Ser
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SequenceListing.ST25

355

360

365

Val Phe Leu Asn Phe Gln Asn Gly Asp Gln Val Leu Lys Tyr Val Asn
 370 375 380
 Ser Thr Ser Ser Pro Lys Ala Lys Ile Gly Leu Gln Gly Thr Leu Ile
 385 390 395 400
 Gly Val Glu Arg Ala Pro Ala Val Ala His Phe Ser Ser Arg Gly Pro
 405 410 415
 Ser Met Thr Cys Pro Phe Ile Leu Lys Pro Asp Leu Met Ala Pro Gly
 420 425 430
 His Leu Ile Leu Ala Ser Trp Ser Pro Leu Ser Ser Val Ser Pro Tyr
 435 440 445
 Thr Glu Leu His Asn Ile Phe Asn Ile Ile Ser Gly Thr Ser Met Ser
 450 455 460
 Cys Pro His Ala Ala Gly Val Ala Ala Leu Val Lys Gly Thr His Pro
 465 470 475 480
 Glu Trp Ser Pro Ala Ala Ile Arg Ser Ala Met Met Thr Thr Ala Asp
 485 490 495
 Val Leu Asp Asn Thr Gln Ser Pro Ile Gln Asp Ile Gly Arg Pro Glu
 500 505 510
 Asn Ala Ala Ala Thr Pro Leu Ala Met Gly Ala Gly His Ile Asn Pro
 515 520 525
 Asn Lys Ala Ile Asp Pro Gly Leu Ile Tyr Asp Thr Thr Pro Gln Asp
 530 535 540
 Tyr Ile Asn Leu Leu Cys Ala Leu Asn Leu Thr Ser Glu Gln Ile Lys
 545 550 555 560
 Thr Ile Thr Arg Ser Ser Tyr Thr Cys Pro Asn Pro Ser Leu Asp Leu
 565 570 575
 Asn Tyr Pro Ser Phe Ile Ala Tyr Phe Asn Val Asn Ser Ser Glu Leu
 580 585 590
 Asp Pro Thr Arg Val Gln Glu Phe Lys Arg Thr Val Thr Asn Val Gly
 595 600 605

SequenceListing.ST25

Glu Gly Val Ser Glu Tyr Thr Ala Glu Leu Thr Ala Met Pro Gly Leu
610 615 620

Lys Val Ser Val Val Pro Glu Lys Leu Val Phe Lys Asp Lys Tyr Glu
625 630 635 640

Lys Gln Ser Tyr Lys Leu Arg Ile Glu Cys Pro Gln Leu Met Asn Asp
645 650 655

Phe Leu Val His Gly Ser Leu Ser Trp Val Glu Lys Gly Gly Lys Tyr
660 665 670

Val Val Arg Ser Pro Ile Val Ala Thr Asn Ser
675 680

<210> 21
<211> 770
<212> PRT
<213> Nicotiana benthamiana

<220>
<221> misc_feature
<222> (211)..(211)
<223> Xaa can be any naturally occurring amino acid

<400> 21

Val Phe Pro Phe Phe Phe Ile Ile Ile Ser Phe Cys Leu Thr Pro Val
1 5 10 15

Thr Ile Ser Val Gln Ser Asp Gly His Glu Thr Phe Ile Ile His Val
20 25 30

Ser Lys Ser Asp Lys Pro Arg Val Phe Thr Thr His His His Trp Tyr
35 40 45

Ser Ser Ile Ile Arg Ser Val Ser Gln His Pro Ser Lys Ile Leu Tyr
50 55 60

Thr Tyr Glu Arg Ala Ala Val Gly Phe Ser Ala Arg Leu Thr Ala Ala
65 70 75 80

Gln Ala Asp Gln Leu Arg Arg Ile Pro Gly Val Ile Ser Val Leu Pro
85 90 95

Asp Glu Val Arg His Leu His Thr Thr His Thr Pro Thr Phe Leu Gly
100 105 110

Leu Ala Asp Ser Phe Gly Leu Trp Pro Asn Ser Asp Tyr Ala Asp Asp
115 120 125

SequenceListing.ST25

Val Ile Val Gly Val Leu Asp Thr Gly Ile Trp Pro Glu Arg Pro Ser
 130 135 140
 Phe Ser Asp Glu Gly Leu Ser Thr Val Pro Ser Ser Trp Lys Gly Lys
 145 150 155 160
 Cys Val Thr Gly Pro Asp Phe Pro Glu Thr Ser Cys Asn Lys Lys Ile
 165 170 175
 Ile Gly Ala Gln Met Phe Tyr Lys Gly Tyr Glu Ala Lys His Gly Pro
 180 185 190
 Met Asp Glu Ser Lys Glu Ser Lys Ser Pro Arg Asp Thr Glu Gly His
 195 200 205
 Gly Thr Xaa Thr Ala Ser Thr Ala Ala Gly Ser Leu Val Ala Asn Ala
 210 215 220
 Ser Phe Tyr Gln Tyr Ala Lys Gly Glu Ala Arg Gly Met Ala Ile Lys
 225 230 235 240
 Ala Arg Ile Ala Ala Tyr Lys Ile Cys Trp Lys Asn Gly Cys Phe Asn
 245 250 255
 Ser Asp Ile Leu Ala Ala Met Asp Gln Ala Val Asp Asp Gly Val His
 260 265 270
 Val Ile Ser Leu Ser Val Gly Ala Asn Gly Tyr Ala Pro His Tyr Leu
 275 280 285
 Tyr Asp Ser Ile Ala Ile Gly Ala Phe Gly Ala Ser Glu His Gly Val
 290 295 300
 Leu Val Ser Cys Ser Ala Gly Asn Ser Gly Pro Gly Ala Tyr Thr Ala
 305 310 315 320
 Val Asn Ile Ala Pro Trp Met Leu Thr Val Gly Ala Ser Thr Ile Asp
 325 330 335
 Arg Glu Phe Pro Ala Asp Val Ile Leu Gly Asp Asn Arg Ile Phe Gly
 340 345 350
 Gly Val Ser Leu Tyr Ser Gly Asn Pro Leu Thr Asp Ala Lys Leu Pro
 355 360 365
 Val Val Tyr Ser Gly Asp Cys Gly Ser Lys Tyr Cys Tyr Pro Gly Lys
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SequenceListing.ST25

370

375

380

Leu Asp Pro Lys Lys Val Ala Gly Lys Ile Val Leu Cys Asp Arg Gly
385 390 395 400

Gly Asn Ala Arg Val Glu Lys Gly Ser Ala Val Lys Gln Ala Gly Gly
405 410 415

Val Gly Met Ile Leu Ala Asn Leu Ala Asp Ser Gly Glu Glu Leu Val
420 425 430

Ala Asp Ser His Leu Leu Pro Ala Thr Met Val Gly Gln Lys Ala Gly
435 440 445

Asp Lys Ile Arg His Tyr Val Thr Ser Asp Pro Ser Pro Thr Ala Thr
450 455 460

Ile Val Phe Arg Gly Thr Val Ile Gly Lys Ser Pro Ala Ala Pro Arg
465 470 475 480

Val Ala Ala Phe Ser Ser Arg Gly Pro Asn His Leu Thr Pro Glu Ile
485 490 495

Leu Lys Pro Asp Val Ile Ala Pro Gly Val Asn Ile Leu Ala Gly Trp
500 505 510

Thr Gly Ser Val Gly Pro Thr Asp Leu Asp Ile Asp Thr Arg Arg Val
515 520 525

Glu Phe Asn Ile Ile Ser Gly Thr Ser Met Ser Cys Pro His Val Gly
530 535 540

Gly Leu Ala Ala Leu Leu Arg Arg Ala His Pro Lys Trp Thr Pro Ala
545 550 555 560

Ala Val Lys Ser Ala Leu Met Thr Thr Ala Tyr Asn Leu Asp Asn Ser
565 570 575

Gly Lys Val Phe Thr Asp Leu Ala Thr Gly Gln Glu Ser Thr Pro Phe
580 585 590

Val His Gly Ser Gly His Val Asp Pro Asn Arg Ala Leu Asp Pro Gly
595 600 605

Leu Ile Tyr Asp Ile Glu Thr Ser Asp Tyr Val Asn Phe Leu Cys Ser
610 615 620

SequenceListing.ST25

Ile Gly Tyr Asp Gly Asp Asp Val Ala Val Phe Ala Arg Asp Ser Ser
625 630 635 640

Arg Val Asn Cys Ser Glu Arg Ser Leu Ala Thr Pro Gly Asp Leu Asn
645 650 655

Tyr Pro Ser Phe Ser Val Val Phe Thr Gly Glu Ser Asn Gly Val Val
660 665 670

Lys Tyr Lys Arg Val Val Asn Asn Val Gly Lys Asn Thr Asp Ala Val
675 680 685

Tyr Glu Val Lys Val Asn Ala Pro Ser Ser Val Glu Val Asn Val Ser
690 695 700

Pro Ala Lys Leu Val Phe Ser Glu Glu Lys Gln Ser Leu Ser Tyr Glu
705 710 715 720

Ile Ser Leu Lys Ser Lys Lys Ser Gly Asp Leu Gln Met Val Lys Gly
725 730 735

Ile Glu Ser Ala Phe Gly Ser Ile Glu Trp Ser Asp Gly Ile His Asn
740 745 750

Val Arg Ser Pro Ile Ala Val Arg Trp Arg His Tyr Ser Asp Ala Ala
755 760 765

Ser Met
770

<210> 22
<211> 770
<212> PRT
<213> Nicotiana benthamiana

<400> 22

Pro Thr Arg Pro Val Phe Pro Phe Phe Phe Ile Ile Ile Ser Phe Cys
1 5 10 15

Leu Thr Pro Val Thr Ile Ser Val Gln Ser Asp Gly His Glu Thr Phe
20 25 30

Ile Ile His Val Ser Lys Ser Asp Lys Pro Arg Val Phe Thr Thr His
35 40 45

His His Trp Tyr Ser Ser Ile Ile Arg Ser Val Ser Gln His Pro Ser
50 55 60

SequenceListing.ST25

Lys Ile Leu Tyr Thr Tyr Glu Arg Ala Ala Val Gly Phe Ser Ala Arg
 65 70 75 80
 Leu Thr Ala Ala Gln Ala Asp Gln Leu Arg Arg Ile Pro Gly Val Ile
 85 90 95
 Ser Val Leu Pro Asp Glu Val Arg His Leu His Thr Thr His Thr Pro
 100 105 110
 Thr Phe Leu Gly Leu Ala Asp Ser Phe Gly Leu Trp Pro Asn Ser Asp
 115 120 125
 Tyr Ala Asp Asp Val Ile Val Gly Val Leu Asp Thr Gly Ile Trp Pro
 130 135 140
 Glu Arg Pro Ser Phe Ser Asp Glu Gly Leu Ser Thr Val Pro Ser Ser
 145 150 155 160
 Trp Lys Gly Lys Cys Val Thr Gly Pro Asp Phe Pro Glu Thr Ser Cys
 165 170 175
 Asn Lys Lys Ile Ile Gly Ala Gln Met Phe Tyr Lys Gly Tyr Glu Ala
 180 185 190
 Lys His Gly Pro Met Asp Glu Ser Lys Glu Ser Lys Ser Pro Arg Asp
 195 200 205
 Thr Glu Gly His Gly Thr His Thr Ala Ser Thr Ala Ala Gly Ser Leu
 210 215 220
 Val Ala Asn Ala Ser Phe Tyr Gln Tyr Ala Lys Gly Met Ala Ile Lys
 225 230 235 240
 Ala Arg Ile Ala Ala Tyr Lys Ile Cys Trp Lys Asn Gly Cys Phe Asn
 245 250 255
 Ser Asp Ile Leu Ala Ala Met Asp Gln Ala Val Asp Asp Gly Val His
 260 265 270
 Val Ile Ser Leu Ser Val Gly Ala Asn Gly Tyr Ala Pro His Tyr Leu
 275 280 285
 Tyr Asp Ser Ile Ala Ile Gly Ala Phe Gly Ala Ser Glu His Gly Val
 290 295 300
 Leu Val Ser Cys Ser Ala Gly Asn Ser Gly Pro Gly Ala Tyr Thr Ala
 305 310 315 320

SequenceListing.ST25

Val Asn Ile Ala Pro Trp Met Leu Thr Val Gly Ala Ser Thr Ile Asp
325 330 335

Arg Glu Phe Pro Ala Asp Val Ile Leu Gly Asp Asn Arg Ile Phe Gly
340 345 350

Gly Val Ser Leu Tyr Ser Gly Asn Pro Leu Thr Asp Ala Lys Leu Pro
355 360 365

Val Val Tyr Ser Gly Asp Cys Gly Ser Lys Tyr Cys Tyr Pro Gly Lys
370 375 380

Leu Asp Pro Lys Lys Val Ala Gly Lys Ile Val Leu Cys Asp Arg Gly
385 390 395 400

Gly Asn Ala Arg Val Glu Lys Gly Ser Ala Val Lys Gln Ala Gly Gly
405 410 415

Val Gly Met Ile Leu Ala Asn Leu Ala Asp Ser Gly Glu Glu Leu Val
420 425 430

Ala Asp Ser His Leu Leu Pro Ala Thr Met Val Gly Gln Lys Ala Gly
435 440 445

Asp Lys Ile Arg His Tyr Val Thr Ser Asp Pro Ser Pro Thr Ala Thr
450 455 460

Ile Val Phe Arg Gly Thr Val Ile Gly Lys Ser Pro Ala Ala Pro Arg
465 470 475 480

Val Ala Ala Phe Ser Ser Arg Gly Pro Asn His Leu Thr Pro Glu Ile
485 490 495

Leu Lys Pro Asp Val Ile Ala Pro Gly Val Asn Ile Leu Ala Gly Trp
500 505 510

Thr Gly Ser Val Gly Pro Thr Asp Leu Asp Ile Asp Thr Arg Arg Val
515 520 525

Glu Phe Asn Ile Ile Ser Gly Thr Ser Met Ser Cys Pro His Val Gly
530 535 540

Gly Leu Ala Ala Leu Leu Arg Arg Ala His Pro Lys Trp Thr Pro Ala
545 550 555 560

Ala Val Lys Ser Ala Leu Met Thr Thr Ala Tyr Asn Leu Asp Asn Ser
565 570 575

SequenceListing.ST25

Gly Lys Val Phe Thr Asp Leu Ala Thr Gly Gln Glu Ser Thr Pro Phe
580 585 590

Val His Gly Ser Gly His Val Asp Pro Asn Arg Ala Leu Asp Pro Gly
595 600 605

Leu Ile Tyr Asp Ile Glu Thr Ser Asp Tyr Val Asn Phe Leu Cys Ser
610 615 620

Met Ala Tyr Asp Gly Asp Asp Val Ala Val Phe Ala Arg Asp Ser Ser
625 630 635 640

Arg Val Asn Cys Ser Glu Arg Ser Leu Ala Thr Pro Gly Asp Leu Asn
645 650 655

Tyr Pro Ser Phe Ser Val Val Phe Thr Gly Glu Ser Asn Gly Val Val
660 665 670

Lys Tyr Lys Arg Val Val Asn Asn Val Gly Lys Asn Thr Asp Ala Val
675 680 685

Tyr Glu Val Lys Val Asn Ala Pro Ser Ser Val Glu Val Asn Val Ser
690 695 700

Pro Ala Lys Leu Val Phe Ser Glu Glu Lys Gln Ser Leu Ser Tyr Glu
705 710 715 720

Ile Ser Leu Lys Ser Lys Lys Ser Gly Asp Leu Gln Met Val Lys Gly
725 730 735

Ile Glu Ser Ala Phe Gly Ser Ile Glu Trp Ser Asp Gly Ile His Asn
740 745 750

Val Arg Ser Pro Ile Ala Val Arg Trp Arg His Tyr Ser Asp Ala Ala
755 760 765

Ser Met
770

<210> 23
<211> 775
<212> PRT
<213> Nicotiana benthamiana

<400> 23

Leu Ser Ser Ser Ser Ser Ser Phe Ser Leu Leu Ile Phe Phe Phe Leu
1 5 10 15

SequenceListing.ST25

Asn Ser Leu Val Ile Ser Val Gln Leu Asp Gly His Lys Thr Phe Ile
 20 25 30
 Val His Val Ser Lys Ser His Lys Pro His Ile Phe Thr Thr Arg Gln
 35 40 45
 His Trp Tyr Ser Ser Ile Leu Arg Ser Val Ser Ser Ser Ser Gln His
 50 55 60
 Ser Ala Lys Ile Leu Tyr Ser Tyr Asp Tyr Ala Ala Arg Gly Phe Ser
 65 70 75 80
 Ala Arg Leu Thr Ser Gly Gln Ala Asp Arg Leu Arg Arg Met Pro Gly
 85 90 95
 Val Val Ser Val Val Pro Asp Arg Ala Arg Gln Leu His Thr Thr His
 100 105 110
 Thr Pro Thr Phe Leu Gly Leu Ala Asp Ser Phe Gly Leu Trp Pro Asn
 115 120 125
 Ser Asp Tyr Ala Asp Asp Val Ile Val Gly Val Leu Asp Thr Gly Ile
 130 135 140
 Trp Pro Glu Arg Pro Ser Phe Ser Asp Gly Gly Leu Ser Ala Val Pro
 145 150 155 160
 Ser Gly Trp Lys Gly Lys Cys Glu Thr Gly Leu Asp Phe Pro Ala Thr
 165 170 175
 Ser Cys Asn Arg Lys Ile Ile Gly Ala Arg Leu Phe Tyr Lys Gly Tyr
 180 185 190
 Glu Ala Asp Arg Gly Ser Pro Ile Asp Glu Ser Lys Glu Ser Lys Ser
 195 200 205
 Pro Arg Asp Thr Glu Gly His Gly Thr His Thr Ala Ser Thr Ala Ala
 210 215 220
 Gly Ser Val Val Ala Asn Ala Ser Phe Phe Gln Tyr Ala Lys Gly Glu
 225 230 235 240
 Ala Arg Gly Met Ala Val Lys Ala Arg Ile Ala Ala Tyr Lys Ile Cys
 245 250 255
 Trp Lys Thr Gly Cys Phe Asp Ser Asp Ile Leu Ala Ala Met Asp Gln
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SequenceListing.ST25

260

265

270

Ala Val Ala Asp Gly Val His Val Ile Ser Leu Ser Val Gly Ala Asp
 275 280 285
 Gly Tyr Ala Pro Glu Tyr Asp Ala Asp Ser Ile Ala Ile Gly Ala Phe
 290 295 300
 Gly Ala Ser Glu His Gly Val Val Val Ser Cys Ser Ala Gly Asn Ser
 305 310 315 320
 Gly Pro Gly Ala Ser Thr Ala Val Asn Val Ala Pro Trp Ile Leu Thr
 325 330 335
 Val Ala Ala Ser Thr Ile Asp Arg Glu Phe Pro Ala Asp Val Ile Leu
 340 345 350
 Gly Asp Gly Arg Ile Phe Gly Gly Val Ser Leu Tyr Ser Gly Asp Pro
 355 360 365
 Leu Gly Asp Ser Lys Leu Pro Leu Val Tyr Ser Gly Asp Cys Gly Ser
 370 375 380
 Gln Leu Cys Tyr Pro Gly Met Leu Asp Pro Ser Lys Val Ala Gly Lys
 385 390 395 400
 Ile Val Leu Cys Asp Arg Gly Gly Asn Ala Arg Val Glu Lys Gly Ser
 405 410 415
 Ala Val Lys Leu Ala Gly Gly Ala Gly Met Val Leu Ala Asn Leu Ala
 420 425 430
 Asp Ser Gly Glu Glu Leu Val Ala Asp Ser His Leu Leu Pro Ala Thr
 435 440 445
 Met Val Gly Gln Lys Ala Gly Asp Glu Ile Arg Asp Tyr Val Lys Ser
 450 455 460
 Asp Ser Ser Pro Lys Ala Thr Ile Val Phe Lys Gly Thr Val Ile Gly
 465 470 475 480
 Lys Ser Pro Ser Ala Pro Arg Ile Ala Ala Phe Ser Gly Arg Gly Pro
 485 490 495
 Asn Tyr Val Thr Pro Glu Ile Leu Lys Pro Asp Val Thr Ala Pro Gly
 500 505 510

SequenceListing.ST25

Val Asn Ile Leu Ala Gly Trp Thr Gly Ser Ile Gly Pro Thr Asp Leu
515 520 525

Glu Ile Asp Thr Arg Arg Val Glu Phe Asn Ile Ile Ser Gly Thr Ser
530 535 540

Met Ser Cys Pro His Val Ser Gly Leu Ala Ala Leu Leu Arg Lys Ala
545 550 555 560

Tyr Pro Lys Trp Thr Thr Ala Ala Ile Lys Ser Ala Leu Met Thr Thr
565 570 575

Ala Tyr Asn Val Asp Asn Ser Gly Lys Thr Phe Thr Asp Leu Ala Thr
580 585 590

Gly Gln Glu Ser Ser Pro Phe Val His Gly Ser Gly His Val Asp Pro
595 600 605

Asn Arg Ala Leu Asp Pro Gly Leu Val Tyr Asp Ile Asp Thr Lys Asp
610 615 620

Tyr Val Asp Phe Leu Cys Ala Ile Gly Tyr Asp Pro Lys Arg Ile Ser
625 630 635 640

Pro Phe Val Lys Asp Thr Ser Ser Val Asn Cys Ser Glu Lys Asn Leu
645 650 655

Val Ser Pro Gly Asp Leu Asn Tyr Pro Ser Phe Ser Val Val Phe Gly
660 665 670

Ser Asp Ser Val Val Lys Asn Lys Arg Val Val Lys Asn Val Gly Arg
675 680 685

Asn Thr Asn Ala Val Tyr Glu Val Lys Ile Asn Ala Pro Gly Ser Val
690 695 700

Glu Val Lys Val Thr Pro Thr Lys Leu Ser Phe Ser Glu Lys Asn Lys
705 710 715 720

Ser Leu Ser Tyr Glu Ile Ser Phe Ser Ser Asn Gly Ser Val Gly Leu
725 730 735

Glu Arg Val Lys Gly Leu Glu Ser Ala Phe Gly Ser Ile Glu Trp Ser
740 745 750

Asp Gly Ile His Ser Val Arg Ser Pro Ile Ala Val His Trp Leu Leu
755 760 765

SequenceListing.ST25

His Ser Ala Thr Glu Ser Gln
770 775

<210> 24
<211> 398
<212> PRT
<213> Nicotiana benthamiana

<400> 24

Gly Val Ile Ile Gly Val Ile Asp Thr Gly Ile Phe Pro Asp His Pro
1 5 10 15

Ser Phe Ser Asp Val Gly Met Ser Pro Pro Pro Ala Lys Trp Lys Gly
20 25 30

Phe Cys Glu Ser Asn Phe Thr Thr Lys Cys Asn Asn Lys Ile Ile Gly
35 40 45

Leu Arg Ser Phe Arg Leu Ser Glu Asp Thr Pro Ile Asp Thr Asp Gly
50 55 60

His Gly Thr His Thr Ala Ser Thr Ala Ala Gly Ala Phe Val Lys Gly
65 70 75 80

Ala Asn Phe Phe Gly Asn Ala Asn Gly Thr Ala Val Gly Val Ala Pro
85 90 95

Leu Ala His Met Ala Ile Tyr Lys Val Cys Ser Phe Ala Thr Cys Ser
100 105 110

Glu Thr Asp Ala Leu Ala Ala Met Asp Ala Ala Ile Asp Asp Gly Val
115 120 125

Asp Ile Ile Ser Ala Ser Leu Gly Gly Phe Thr Asn Ala Pro Leu His
130 135 140

Asp Asp Pro Ile Ser Leu Gly Ala Tyr Ser Ala Thr Glu Lys Gly Ile
145 150 155 160

Leu Ala Ser Ala Ser Ala Gly Asn Ser Glu Phe Asp Asn Pro Val Ala
165 170 175

Asn Asn Ala Pro Trp Ile Leu Thr Val Gly Ala Ser Thr His Asp Arg
180 185 190

Lys Leu Lys Ala Thr Val Lys Leu Gly Asn Lys Glu Glu Phe Glu Gly
195 200 205

SequenceListing.ST25

Glu Ser Ala Asp Gln Pro Lys Thr Ser Asn Ser Thr Phe Ile Ala Leu
 210 215 220

Phe Asp Ala Gly Lys Asn Ala Ser Asp Gln Asp Ala Pro Phe Cys Arg
 225 230 235 240

Ser Trp Ala Met Thr Asp Pro Ala Ile Lys Gly Lys Ile Val Leu Cys
 245 250 255

Gln Lys Asp Pro Ser Ser Leu Thr Ser Ser Gln Gly Arg Asn Val Lys
 260 265 270

Asp Ala Gly Gly Val Gly Met Ile Leu Ile Asn Asn Pro Glu Asp Gly
 275 280 285

Val Thr Lys Ser Ala Thr Ala His Val Leu Pro Ala Leu Asp Val Ser
 290 295 300

His Glu Glu Gly Glu Lys Ile Lys Ala Tyr Ile Asn Ser Thr Ser Asn
 305 310 315 320

Pro Ile Ala Ala Ile Thr Phe Gln Gly Thr Val Ile Gly Asp Lys Asn
 325 330 335

Ala Pro Ile Val Ala Ser Phe Ser Ala Arg Gly Pro Ser Arg Ala Asn
 340 345 350

Pro Gly Ile Leu Lys Pro Asp Ile Ile Gly Pro Gly Val Asn Ile Leu
 355 360 365

Ala Ala Trp Pro Thr Thr Val Asn Ile Pro Asn Lys Asn Thr Asn Ser
 370 375 380

Gly Phe Asn Ile Ile Ser Gly Thr Ser Met Ser Cys Pro His
 385 390 395

<210> 25
 <211> 398
 <212> PRT
 <213> Nicotiana benthamiana

<400> 25

Gly Val Ile Ile Gly Val Ile Asp Thr Gly Ile Val Pro Asp His Pro
 1 5 10 15

Ser Phe Ser Asp Val Gly Met Pro Pro Pro Ala Lys Trp Lys Gly
 20 25 30

SequenceListing.ST25

Phe Cys Glu Ser Asn Phe Thr Thr Lys Arg Asn Asn Lys Leu Ile Gly
 35 40 45
 Ala Arg Ser Phe Pro Leu Asp Asn Gly Pro Ile Asp Glu Asn Gly His
 50 55 60
 Gly Thr His Thr Ala Ser Thr Ala Ala Gly Ala Phe Val Lys Gly Ala
 65 70 75 80
 Asn Val Phe Gly Asn Ala Asn Gly Thr Ala Val Gly Val Ala Pro Leu
 85 90 95
 Ala His Ile Ala Ile Tyr Lys Val Cys Gly Ser Asp Gly Val Cys Ser
 100 105 110
 Asp Val Glu Ile Leu Pro Ala Met Asp Val Ala Ile Asp Asp Gly Val
 115 120 125
 Asp Ile Leu Ser Ile Ser Leu Gly Gly Thr Ser Asn Pro Phe His Asn
 130 135 140
 Asp Lys Ile Ala Leu Gly Ala Tyr Ser Ala Thr Glu Arg Gly Ile Leu
 145 150 155 160
 Val Ser Cys Ser Ala Gly Asn Ser Gly Pro Phe Gln Arg Thr Val Asn
 165 170 175
 Asn Asp Ala Pro Trp Ile Leu Thr Val Gly Ala Ser Thr His Asp Arg
 180 185 190
 Lys Leu Lys Ala Thr Val Lys Leu Gly Asn Lys Glu Glu Phe Glu Gly
 195 200 205
 Glu Ser Ala Tyr His Pro Lys Thr Ser Ser Ser Thr Phe Phe Thr Leu
 210 215 220
 Phe Asp Val Glu Lys Asp Gly Thr Arg Ala Thr Arg Ala Pro Phe Cys
 225 230 235 240
 Ile Pro Gly Ser Leu Thr Asp Pro Ser Ile Arg Gly Lys Ile Val Val
 245 250 255
 Cys Leu Val Gly Gly Gly Val Arg Thr Val Asp Lys Gly Gln Val Val
 260 265 270
 Lys Asp Ala Gly Gly Val Gly Met Ile Leu Ile Asn Asn Pro Glu Asp
 275 280 285

SequenceListing.ST25

Gly Val Thr Lys Ser Ala Glu Ala His Val Leu Pro Ala Leu Asp Val
290 295 300

Ser Asp Ala Asp Gly Lys Lys Ile Leu Ala Tyr Ile Asn Ser Thr Ser
305 310 315 320

Asn Pro Val Ala Ala Ile Thr Phe His Gly Thr Val Leu Gly Asp Lys
325 330 335

Asn Ala Pro Ile Val Ala Ser Phe Ser Ser Arg Gly Pro Ser Glu Ala
340 345 350

Ser Arg Gly Ile Leu Lys Pro Asp Ile Ile Gly Pro Gly Val Asn Val
355 360 365

Leu Ala Ala Trp Pro Thr Ser Val Asp Asn Asn Lys Asn Thr Lys Ser
370 375 380

Thr Phe Asn Ile Ile Ser Gly Thr Ser Met Ser Cys Pro His
385 390 395

<210> 26

<211> 166

<212> PRT

<213> Nicotiana benthamiana

<400> 26

His Ala Ser Asp Gly Ala Gly His Ile Asn Pro Arg Lys Ala Val Asp
1 5 10 15

Pro Gly Leu Val Tyr Asp Ile Gly Ala Gln Asp Tyr Phe Glu Phe Leu
20 25 30

Cys Thr Gln Gln Leu Ser Pro Ser Gln Leu Thr Val Phe Gly Lys Phe
35 40 45

Ser Asn Arg Thr Cys His His Ser Leu Ala Asn Pro Gly Asp Leu Asn
50 55 60

Tyr Pro Ala Ile Ser Ala Val Phe Pro Glu Asp Ala Lys Val Ser Thr
65 70 75 80

Leu Thr Leu His Arg Thr Val Thr Asn Val Gly Ser Pro Ile Ser Asn
85 90 95

Tyr His Val Arg Val Ser Pro Phe Lys Gly Ala Val Val Lys Val Glu
100 105 110

SequenceListing.ST25

Pro Ser Arg Leu Asn Phe Thr Ser Lys His Gln Lys Leu Ser Tyr Lys
115 120 125

Val Ile Phe Glu Thr Lys Tyr Arg Gln Lys Ala Arg Glu Phe Gly Ser
130 135 140

Leu Leu Trp Lys Asp Gly Thr His Lys Val Arg Ser Thr Ile Val Ile
145 150 155 160

Thr Trp Leu Ala Ser Ile
165

<210> 27
<211> 766
<212> PRT
<213> Nicotiana benthamiana

<220>
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<222> (455)..(455)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (458)..(458)
<223> Xaa can be any naturally occurring amino acid

<220>
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<223> Xaa can be any naturally occurring amino acid

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<223> Xaa can be any naturally occurring amino acid

<220>
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<223> Xaa can be any naturally occurring amino acid

SequenceListing.ST25

<220>

<221> misc_feature

<222> (648)..(648)

<223> Xaa can be any naturally occurring amino acid

<400> 27

Met Ala Arg Pro Gly Gly Met Val Leu Ser Thr Leu Phe Leu Met Leu
1 5 10 15

Phe His Val Phe Val His Ala Gly Gln Asn Gln Lys Lys Thr Tyr Ile
20 25 30

Ile Tyr Met Asp Lys Ser Asn Ile Pro Ala Asp Phe Asp Asp His Thr
35 40 45

Leu Trp Tyr Asp Ser Ser Leu Lys Ser Val Ser Lys Gly Ala Asn Met
50 55 60

Leu Tyr Thr Tyr Asn Asn Val Ile His Gly Tyr Ser Thr Gln Leu Thr
65 70 75 80

Ala Asp Glu Ala Lys Ser Leu Glu Gln Gln Pro Gly Ile Leu Ser Val
85 90 95

His Glu Glu Val Arg Tyr Glu Leu His Thr Thr Arg Ser Pro Thr Phe
100 105 110

Leu Gly Leu Glu Gly Arg Glu Ser Lys Ser Phe Phe Leu Gln Ala Glu
115 120 125

Thr Arg Ser Glu Val Ile Ile Gly Val Leu Asp Thr Gly Val Trp Pro
130 135 140

Glu Ser Lys Ser Phe Asp Asp Thr Gly Leu Gly Pro Val Pro Met Ser
145 150 155 160

Trp Lys Gly Glu Cys Gln Ile Gly Lys Asn Phe Lys Ala Ser Ser Cys
165 170 175

Asn Arg Lys Leu Ile Gly Ala Arg Phe Phe Ser Gln Gly Tyr Glu Ala
180 185 190

Ala Phe Gly Ala Ile Asp Glu Thr Thr Glu Ser Lys Ser Pro Arg Asp
195 200 205

Asp Asp Gly His Gly Thr His Thr Ala Thr Thr Ala Ala Gly Ser Val
210 215 220

SequenceListing.ST25

Val Thr Gly Ala Ser Leu Phe Gly Tyr Ala Ala Gly Thr Ala Arg Gly
 225 230 235 240
 Met Ala Ser His Ala Arg Val Ala Ala Tyr Lys Val Cys Trp Ala Gly
 245 250 255
 Gly Cys Phe Ser Ser Asp Ile Leu Ala Gly Met Asp Gln Ala Val Ile
 260 265 270
 Asp Gly Val Asn Val Leu Ser Leu Ser Leu Gly Gly Thr Ile Ser Asp
 275 280 285
 Tyr Tyr Arg Asp Ile Val Ala Ile Gly Gly Phe Ser Ala Ala Ser Gln
 290 295 300
 Gly Ile Phe Val Ser Cys Ser Ala Gly Asn Gly Gly Pro Gly Ser Gly
 305 310 315 320
 Ser Leu Ser Asn Ala Ala Pro Trp Ile Thr Thr Val Gly Ala Gly Thr
 325 330 335
 Met Asp Arg Glu Phe Pro Ala Tyr Ile Ser Leu Gly Asn Gly Lys Lys
 340 345 350
 Phe Ser Gly Val Ser Leu Tyr Ser Gly Lys Ala Leu Pro Ser Ser Val
 355 360 365
 Met Pro Leu Val Tyr Ala Gly Asn Ala Ser Gln Ala Ser Asn Gly Asn
 370 375 380
 Leu Cys Thr Ser Gly Ser Leu Ile Pro Glu Lys Val Asp Gly Lys Ile
 385 390 395 400
 Val Val Cys Asp Arg Gly Met Asn Ala Arg Ala Gln Lys Gly Leu Val
 405 410 415
 Val Lys Asp Ala Gly Gly Ile Gly Met Ile Leu Ala Asn Thr Asp Ser
 420 425 430
 Tyr Gly Asp Glu Leu Val Ala Asp Ala His Leu Ile Pro Thr Gly Ala
 435 440 445
 Val Gly Gln Thr Ala Gly Xaa Leu Ile Xaa Arg Tyr Ile Ala Ser Asp
 450 455 460
 Ser Asn Pro Ile Thr Thr Ile Ala Phe Gly Gly Thr Lys Leu Gly Val
 465 470 475 480

SequenceListing.ST25

Gln Pro Ser Pro Val Val Ala Ala Phe Ser Ser Arg Gly Pro Asn Pro
485 490 495

Ile Thr Pro Glu Ile Leu Lys Pro Asp Leu Ile Ala Pro Gly Val Asn
500 505 510

Ile Leu Ala Gly Trp Thr Gly Lys Val Gly Pro Thr Gly Leu Pro Glu
515 520 525

Asp Thr Arg Asn Val Gly Phe Asn Ile Ile Ser Gly Thr Ser Met Ser
530 535 540

Cys Xaa His Val Ser Gly Leu Ala Ala Xaa Leu Xaa Ala Ala His Pro
545 550 555 560

Glu Trp Ser Xaa Gly Val Ile Arg Ser Ala Leu Met Thr Thr Gly Tyr
565 570 575

Ser Thr His Lys Asn Gly Xaa Met Ile Glu Asp Val Ala Thr Gly Met
580 585 590

Ser Tyr Thr Pro Val Asp His Gly Ala Gly His Val Asn Pro Ala Ala
595 600 605

Ala Met Asn Pro Gly Leu Xaa Tyr Asp Leu Thr Val Asp Asp Tyr Ile
610 615 620

Asn Phe Leu Cys Ala Leu Asp Tyr Ser Pro Ser Met Ile Lys Val Ile
625 630 635 640

Ala Lys Arg Asp Ile Ser Cys Xaa Asn Asn Lys Asp Ile Glu Leu Leu
645 650 655

Thr Leu Ile Thr His Leu Leu Pro Phe Leu Trp Lys Arg Ala Trp Gly
660 665 670

Glu His Ala Asn Ser Ser Ala Pro Thr Val Thr Arg Tyr Thr Arg Thr
675 680 685

Leu Thr Asn Val Gly Asn Pro Ala Thr Tyr Lys Ala Ser Val Ser Ser
690 695 700

Glu Met Gln Glu Val Lys Ile Gln Val Glu Pro Gln Thr Leu Thr Phe
705 710 715 720

Ser Arg Lys Lys Glu Lys Lys Thr Tyr Thr Val Thr Phe Thr Ala Ser

SequenceListing.ST25

725

730

735

Ser Lys Pro Ser Gly Thr Thr Ser Phe Ala Arg Leu Glu Trp Ser Asp
 740 745 750

Gly Gln His Val Val Ala Ser Pro Ile Ala Phe Ser Trp Thr
 755 760 765

<210> 28
 <211> 350
 <212> PRT
 <213> Nicotiana benthamiana

<400> 28

Asp Arg Ile Glu Lys Gly Gln Ala Val Lys Asn Ala Gly Gly Val Gly
 1 5 10 15

Met Ile Leu Ile Asn Arg Leu Gln Asp Gly Ser Thr Lys Ser Ala Asp
 20 25 30

Ala His Val Leu Pro Ala Leu Asp Val Ser Phe Phe Asp Gly Phe Gln
 35 40 45

Ile Thr Glu Tyr Met Lys Ser Thr Lys Asn Pro Val Ala Arg Ile Thr
 50 55 60

Phe Gln Gly Thr Ile Ile Gly Asp Lys Asn Ala Pro Val Leu Ala Gly
 65 70 75 80

Phe Ser Ser Arg Gly Pro Ser Thr Ala Ser Pro Gly Ile Leu Lys Pro
 85 90 95

Asp Ile Ile Gly Pro Gly Val Asn Val Leu Ala Ala Trp Pro Thr Ser
 100 105 110

Val Glu Asn Lys Thr Asn Thr Lys Ser Thr Phe Asn Ile Ile Ser Gly
 115 120 125

Thr Ser Met Ser Cys Pro His Leu Ser Gly Val Ala Ala Leu Leu Lys
 130 135 140

Ser Ala His Pro Thr Trp Ser Pro Ala Ala Ile Lys Ser Ala Ile Met
 145 150 155 160

Thr Thr Ala Asp Thr Val Asn Leu Ala Asn Asn Pro Ile Leu Asp Glu
 165 170 175

Met Leu Arg Pro Ala Asn Ile Phe Ala Ile Gly Ala Gly His Val Asn
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SequenceListing.ST25

180

185

190

Pro Ser Arg Ala Asn Asp Pro Gly Leu Val Tyr Asp Thr Gln Phe Lys
 195 200 205

Asp Tyr Ile Ser Tyr Leu Cys Gly Leu Lys Tyr Thr Asp Arg Gln Met
 210 215 220

Gly Ser Leu Leu Gln Arg Arg Thr Ser Cys Ser Lys Val Lys Ser Ile
 225 230 235 240

Pro Glu Ala Gln Leu Asn Tyr Pro Ser Phe Ser Ile Ser Leu Gly Ala
 245 250 255

Asn Gln Gln Thr Tyr Thr Arg Thr Val Thr Asn Val Gly Glu Ala Met
 260 265 270

Ser Ser Tyr Arg Val Lys Ile Val Ser Pro Gln Asn Val Ser Val Val
 275 280 285

Val Lys Pro Ser Thr Leu Lys Phe Thr Lys Leu Asn Gln Lys Leu Thr
 290 295 300

Tyr Arg Val Thr Phe Ser Thr Thr Thr Asn Ile Thr Asn Met Glu Val
 305 310 315 320

Val His Gly Tyr Leu Lys Trp Thr Ser Asp Lys His Phe Val Arg Ser
 325 330 335

Pro Ile Ala Val Ile Leu Gln Glu His Glu Thr Pro Glu Asp
 340 345 350

<210> 29

<211> 181

<212> PRT

<213> Nicotiana benthamiana

<400> 29

Ala Ile Thr Ala Gly His Val Asn Pro Glu Ser Ala Ile Asp Pro Gly
 1 5 10 15

Leu Ile Tyr Asp Thr Asp Thr Ser Asp Tyr Ile Asn Leu Leu Cys Ser
 20 25 30

Leu Asn Tyr Thr Glu Lys Glu Met Lys Leu Phe Thr Asn Glu Ser Asn
 35 40 45

Pro Cys Ser Gly Phe Thr Gly Ser Pro Leu Asp Leu Asn Tyr Pro Ser
 Page 44

SequenceListing.ST25

50

55

60

Leu Ser Val Met Phe Arg Pro Asp Ser Ser Val His Val Val Lys Arg
65 70 75 80

Thr Leu Thr His Val Ala Val Ser Lys Pro Glu Val Tyr Lys Val Lys
85 90 95

Ile Leu Asn Leu Asn Ser Glu Lys Val Ser Leu Ser Ile Ser Pro Met
100 105 110

Glu Leu Met Phe Asn Glu Ser Leu Arg Lys Gln Arg Tyr Met Val Lys
115 120 125

Phe Glu Ser His His Ile Phe Asn Ser Ser Arg Lys Ile Ala Glu Gln
130 135 140

Met Ala Phe Gly Ser Ile Ser Trp Glu Ser Glu Lys His Asn Val Arg
145 150 155 160

Ser Pro Phe Ala Val Met Trp Val Gln Gln Asn Phe Asn Asn Ser Arg
165 170 175

Leu Tyr Lys Ile Thr
180

<210> 30
<211> 10
<212> PRT
<213> Nicotiana benthamiana

<400> 30

Thr Thr His Thr Ser Gln Phe Leu Gly Leu
1 5 10

<210> 31
<211> 14
<212> PRT
<213> Nicotiana benthamiana

<400> 31

Phe Gly Tyr Ala Thr Gly Thr Ala Ile Gly Ile Ala Pro Lys
1 5 10

<210> 32
<211> 24
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<213> Artificial Sequence

<220>

SequenceListing.ST25

<223> Used in PCR

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gtcctaattcc ctagggattt aagg

24

<210> 33
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Used in PCR

<400> 33
ctttggaaat tgcagaaac

19

<210> 34
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Used in PCR

<400> 34
gtttctgcaa tttccaaag

19

<210> 35
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Used in PCR

<400> 35
gaattcgggg taccgcggcc gcgatatcct gcagggcggtt aactc

45

<210> 36
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Used in PCR

<400> 36
gaattcggta ccctgcagga tatcgcggcc gcggcggttaa ctcgg

45

<210> 37
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Used in PCR

<400> 37

tggttctgca gttatgcata ggcgtgatta tcggagttat ag

<210> 38
 <211> 37
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Used in PCR

<400> 38
 tttccttttg cggccgcgtg agggcaagac attgatg

<210> 39
 <211> 249
 <212> PRT
 <213> Nicotiana benthamiana

<400> 39

Gly Val Ile Ile Gly Val Ile Asp Thr Gly Ile Val Pro Asp His Pro
 1 5 10 15

Ser Phe Ser Asp Val Gly Met Pro Pro Pro Pro Ala Lys Trp Lys Gly
 20 25 30

Phe Cys Glu Ser Asn Phe Thr Thr Lys Cys Asn Asn Lys Leu Ile Gly
 35 40 45

Ala Arg Ser Phe Pro Leu Asp Asn Gly Pro Ile Asp Glu Asn Gly His
 50 55 60

Gly Thr His Thr Ala Ser Thr Ala Ala Gly Ala Phe Val Lys Gly Ala
 65 70 75 80

Asn Val Phe Gly Asn Ala Asn Gly Thr Ala Val Gly Val Ala Pro Leu
 85 90 95

Ala Tyr Ile Ala Ile Tyr Lys Val Cys Gly Ser Asp Gly Val Cys Ser
 100 105 110

Asp Val Glu Ile Leu Ala Ala Met Asp Val Ala Ile Asp Asp Gly Val
 115 120 125

Asp Ile Leu Ser Ile Ser Leu Gly Gly Thr Ser Asn Pro Phe His Asn
 130 135 140

Asp Lys Ile Ala Leu Gly Ala Tyr Ser Ala Thr Glu Arg Gly Ile Leu
 145 150 155 160

Val Ser Cys Ser Ala Gly Asn Ser Gly Pro Phe Gln Arg Thr Val Asp

SequenceListing.ST25

165

170

175

Asn Asp Ala Pro Trp Ile Leu Thr Val Gly Ala Ser Thr His Asp Arg
180 185 190

Lys Leu Lys Ala Thr Val Lys Leu Gly Asn Lys Glu Glu Phe Glu Gly
195 200 205

Glu Ser Ala Tyr His Pro Lys Thr Ser Asn Ser Thr Phe Phe Thr Leu
210 215 220

Phe Asp Val Glu Lys Ile Val His Glu Gln Pro Val Ala Pro Phe Cys
225 230 235 240

Ile Pro Gly Ser Leu Thr Asp Pro Ser
245

<210> 40

<211> 249

<212> PRT

<213> Nicotiana benthamiana

<400> 40

Gly Val Ile Ile Gly Val Ile Asp Thr Gly Ile Val Pro Asp His Pro
1 5 10 15

Ser Phe Ser Asp Val Gly Met Pro Pro Pro Pro Ala Lys Trp Lys Gly
20 25 30

Phe Cys Glu Ser Asn Phe Thr Thr Lys Cys Asn Asn Lys Leu Ile Gly
35 40 45

Ala Arg Ser Phe Pro Leu Asp Asn Gly Pro Ile Asp Glu Asn Gly His
50 55 60

Gly Thr His Thr Ala Ser Thr Ala Ala Gly Ala Phe Val Lys Gly Ala
65 70 75 80

Asn Val Phe Gly Asn Ala Asn Gly Thr Ala Val Gly Val Ala Pro Leu
85 90 95

Ala Tyr Ile Ala Ile Tyr Lys Val Cys Gly Ser Asp Gly Val Cys Ser
100 105 110

Asp Val Glu Ile Leu Ala Ala Met Asp Val Ala Ile Asp Asp Gly Val
115 120 125

Asp Ile Leu Ser Ile Ser Leu Gly Gly Thr Ser Asn Pro Phe His Asn
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SequenceListing.ST25

130

135

140

Asp Lys Ile Ala Leu Gly Ala Tyr Ser Ala Thr Glu Arg Gly Ile Leu
145 150 155 160

Val Ser Cys Ser Ala Gly Asn Ser Gly Pro Phe Gln Arg Thr Val Asp
165 170 175

Asn Asp Ala Pro Trp Ile Leu Thr Val Gly Ala Ser Thr His Asp Arg
180 185 190

Lys Leu Lys Ala Thr Val Lys Leu Gly Asn Lys Glu Glu Phe Glu Gly
195 200 205

Glu Ser Ala Tyr His Pro Lys Thr Ser Asn Ser Thr Phe Phe Thr Leu
210 215 220

Phe Asp Val Glu Lys Ile Val His Glu Gln Pro Val Ala Pro Phe Cys
225 230 235 240

Ile Pro Gly Ser Leu Thr Asp Pro Ser
245